Loving music

Performance SE

User manual

Made in Germany

Hi-Fi Components clearaudio electronic GmbH

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Version-1.2_02-28-12_E

Dear **clearaudio**-customer,

you have purchased a state-of-the-art turntable, the *Performance SE*, a world class product of clearaudio **electronic** GmbH.
The special resonance-optimised construction, the external motor-unit and the patented **clearaudio** - CMB-bearing-technology guarantees absolute speed stability, pure pleasure in listening and reproduction in accordance to the original.

Thank you very much for your confidence.

Please read this user manual carefully so that you can enjoy all advantages of your *Performance SE*-turntable. All information given will help to generate best set up and avoid any possible damages.

We hope you will enjoy your new **clearaudio** *Performance SE* -turntable.

clearaudio electronic GmbH

Please read the warnings before connecting your *Performance SE* -turntable to the mains supply.

WARNINGS

Don't expose your performance-turntable to rain or humidity.
Don't handle the mains leads with wet hands.
Don't place or insert anything into the equipment or through ventilation holes.
No naked flame sources, such as lighted candles, should be placed on the equipment.

CE-MARKING

CE The **clearaudio** *Performance SE* meets the regulations concerning electromagnetic disturbance (EMC) and low-voltage appliances.

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- Copyright Act 1956,
- Dramatic and Musical Performers Act 1958,
- Performers Protection Acts 1963 and 1072,
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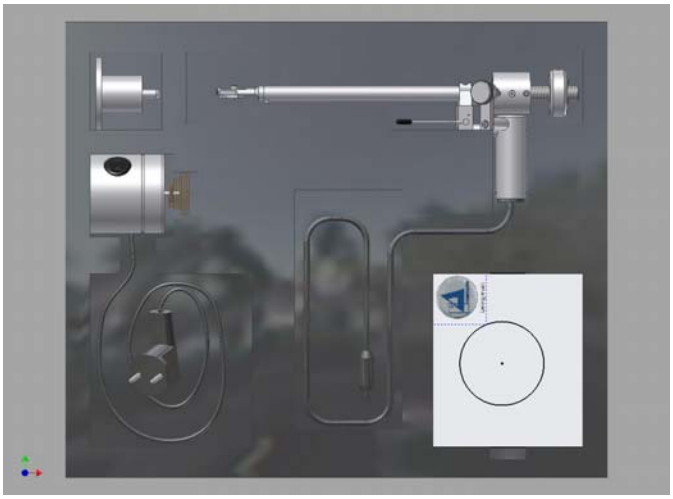
1. Packaging overview

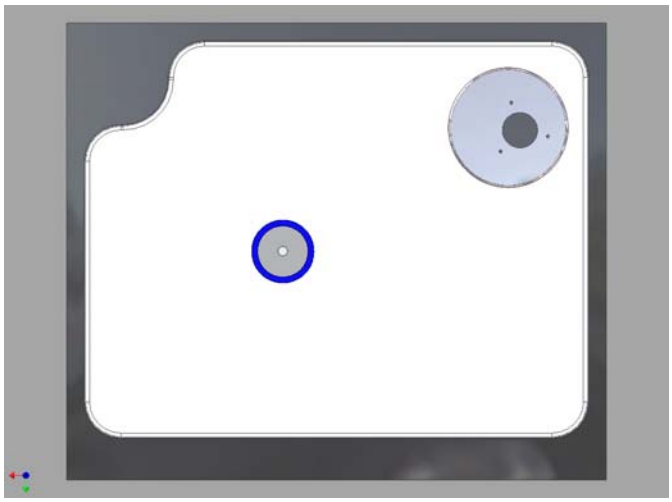
1. Layer (top):

Motor-unit, motor-basis (not shown) top of bearing, belt, pulley, fittings and accessories
If ordered as set: satisfy tonearm and/or pickup



2. Layer (middle):

Turntable - chassis



3. Layer (bottom):

Platter

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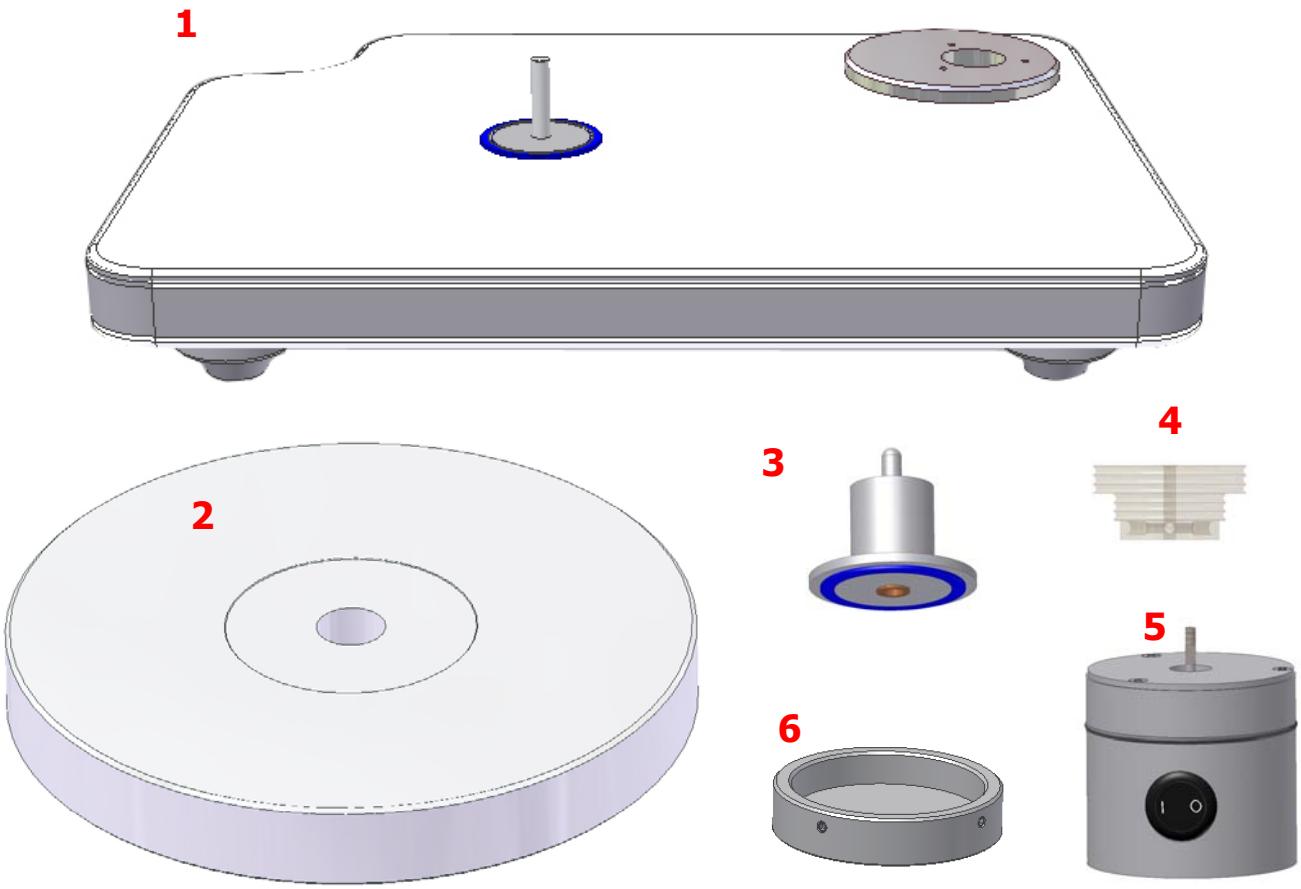
2. Packing contents

The **clearaudio** *Performance SE*-turntable is delivered in a especially designed and custom packaging.

Please check the contents according to the following list before you set up your new **clearaudio** *Performance SE*-turntable.



1	Chassis with built-in bearing and tone arm base	2	Turntable platter
3	Top of the CMB - bearing	4	6-cut pulley for 230V motor or 2-cut pulley for 110 V motor, incl. fixing screws
5	Motor-unit with attached power cord	6	Motor stand, made out of stainless steel

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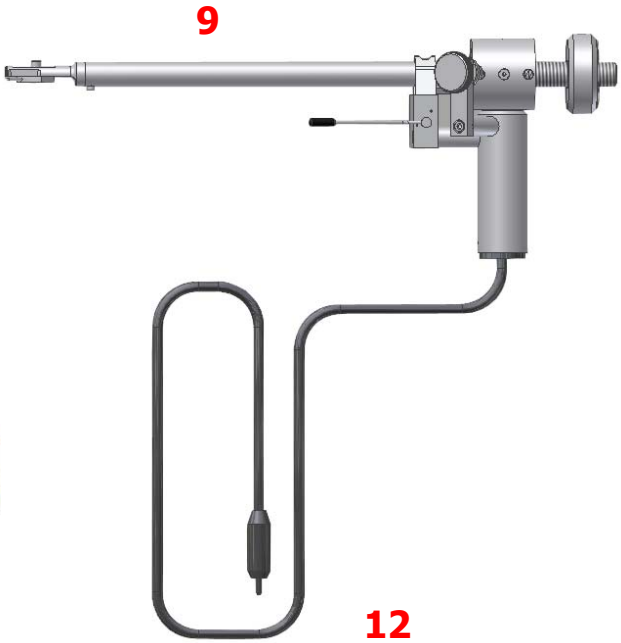

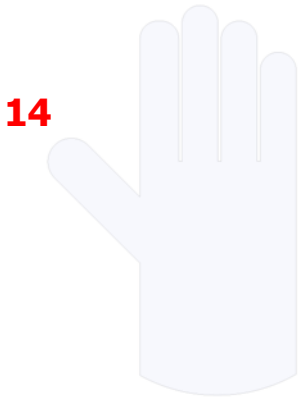

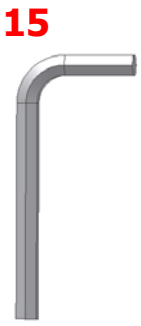

7	Synthetic bearing oil (2,5 ml)	8	Level gauge
9	Optional: Satisfy Tonearm	10	Ground wire (if hum occures) (drilling for ground wire on the backside of the tonearmbase)
11	**clearaudio** Smart Stylus Gauge (without cartridge)	12	Optional: Maestro MM pick-up
13	2 Silent belts 2mm (1 for replacement)	14	Pair of white gloves
15	Allen wrench size 3	16	Screwdriver (for fixing the pulley)
17	Warranty-certificate (card)		

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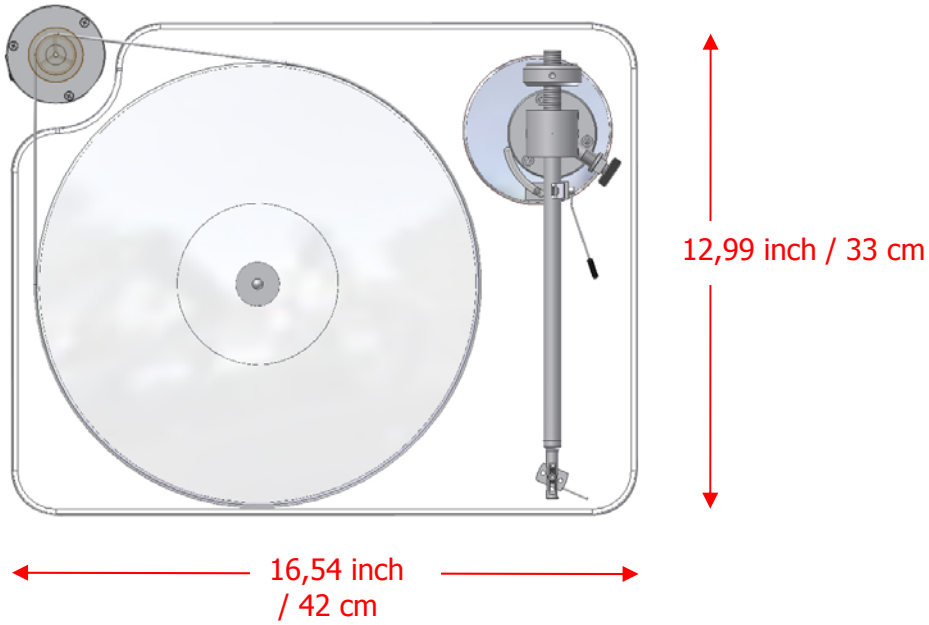
3. Set-up and operation

The *Performance SE* -turntable consists of several devices, as described in No 2 (Packing content).
The set up is easy as some of the components are pre-assembled at the factory.
Please make use of the white gloves enclosed in order to avoid scratches or unwanted fingerprints (platter).

Please follow the description step by step:

The *Performance SE* requires a space of at least 16,54 inch x 12,99 inch for positioning.



Picture 1: Setting up space

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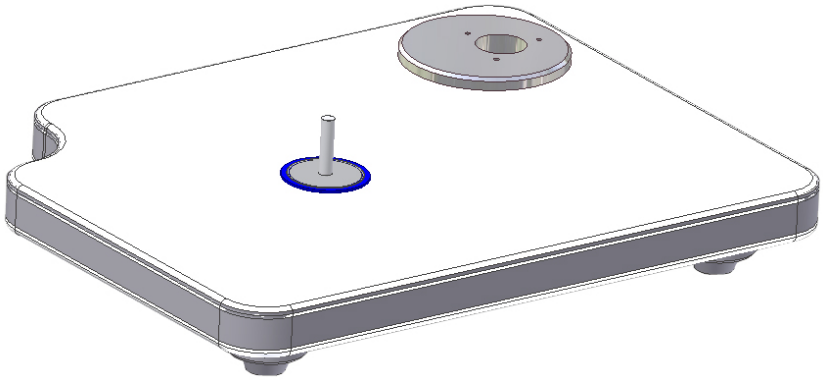
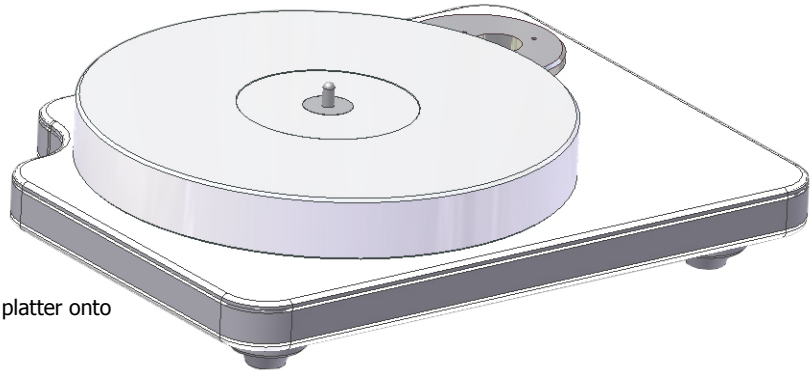
Place the pre-mounted chassis on your hifi-rack or another suitable base.



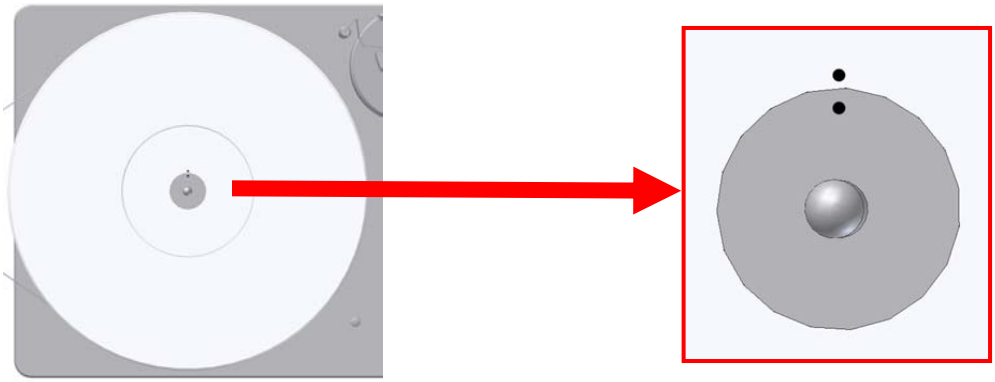
Picture 2: Performance SE chassis

Please remove the protective seal from the bearing shaft and place two drops of the synthetic bearing oil on the ceramic bearing shaft. Slip the bearing top onto the bearing shaft of the turntable (please remove the safety strip first). Now you can set the platter carefully onto the bearing. To avoid damages make sure you slide the inverted bearing slowly and cautiously on the polished ceramic shaft. Hold the platter in one hand while with the other is securing the bearing top so it can neither slip and nor fall on your turntable.



Picture 3: Setting the platter onto the bearing

The marks (dots) on the platter and the top of the bearing have been carefully measured. Please make sure they align exactly as shown in the picture.



Picture 4: Congruence of platter and bearing

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4. Tonearm- and pick-up setting

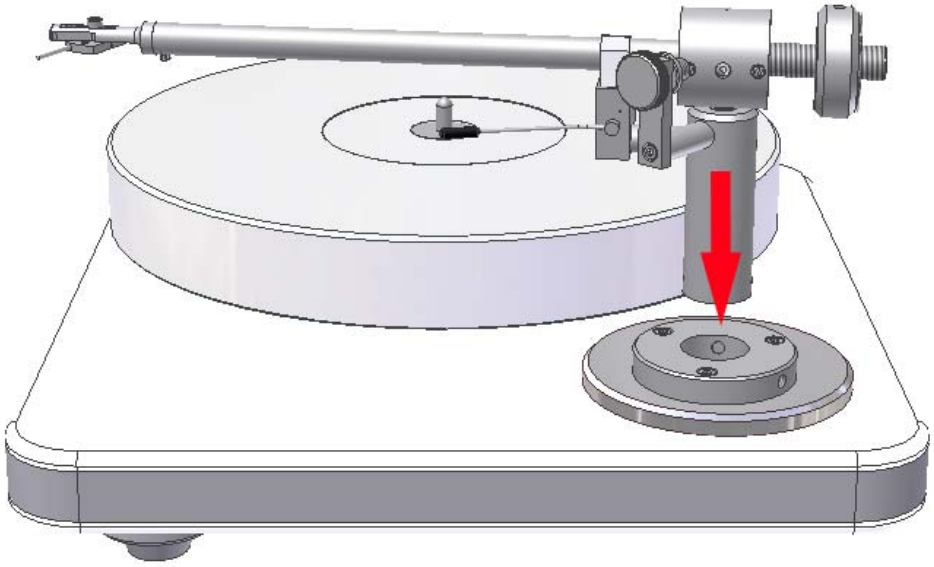
Satisfy-Tonearm mounting

Please fix the base of the satisfy-tonearm on the basis on your *Performance SE*-turntable chassis using the short screws (M4x20).

Tighten the screws of the satisfy-tonearm base using the allen screwdriver enclosed.

Picture 5: Satisfy - tonearm mount base

Pass the cables of the satisfy-tonearm carefully through the tonearm base.
Please make sure that the cables will not damaged or bent too much.



Picture 6: Passing the Satisfy – tonearm through the tonearm base

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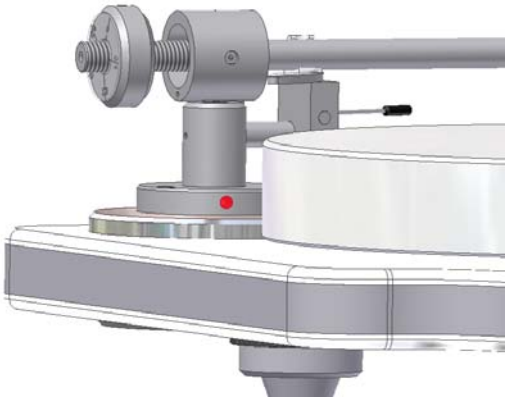
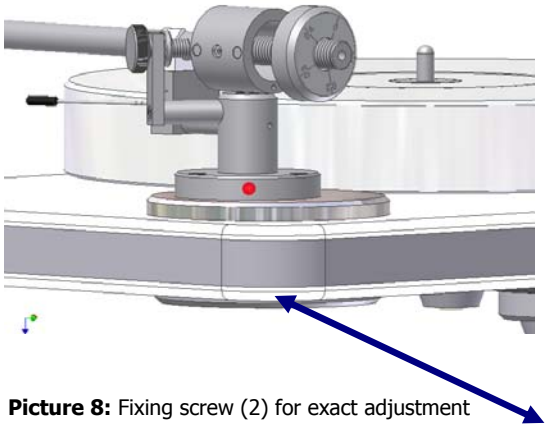
Secure the tonearm only slightly using the fixing screws (marked red in the picture 1 and 2) so you can still move it for exact adjustment. After adjusting the vertical position you should tighten the fixing screws to place the tonearm in it's final position.

1



Picture 7: Fixing screw (1) for exact adjustment

2



Picture 8: Fixing screw (2) for exact adjustment

Drilling for the ground wire

The right vertical position of the tonearm depends on the height of the pick-up/cartridge.
Therefore the pick-up-cartridge has to be installed next.

The exact setting of the tonearm requires the installation of the pick-up/cartridge. Please follow the instructions given by the pick- up manufacturer !

When installing the pick-up/cartridge connect the four coloured cables of the tonearm to the four coloured connection pins of the pick-up/cartridge.

Colour code key of the satisfy-tonearm cables:

Left channel (L+)	→	white
Left channel (L -)	→	blue
Right channel (R+)	→	red
Right channel (R -)	→	green

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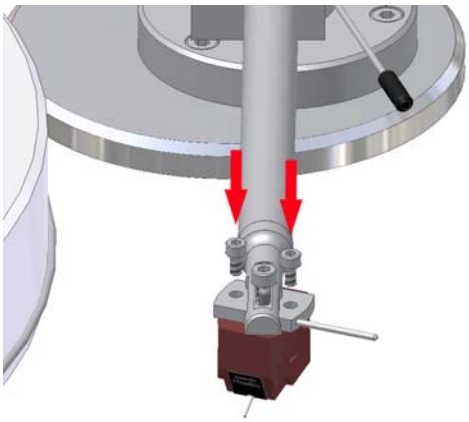
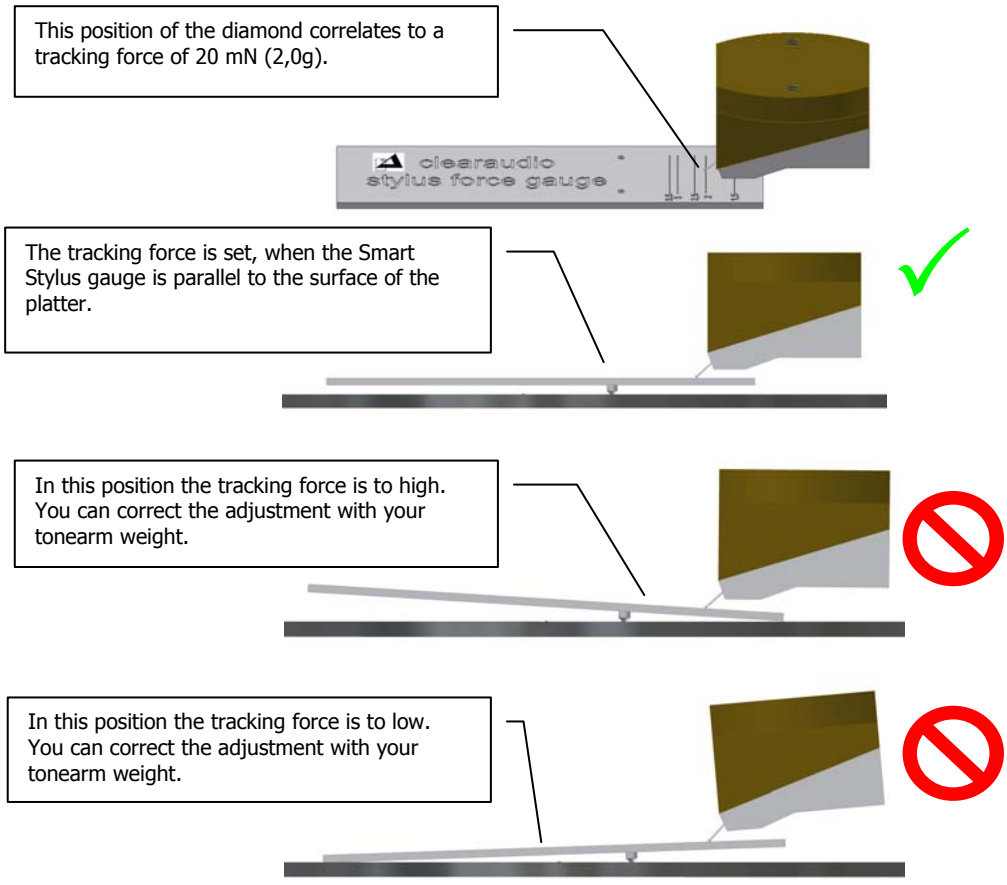
Use the enclosed headshell screws (2x M 2,5) to fix the pick-up/cartridge to the headshell of the tonearm.



Picture 9: Mounting the cartridge

For a more comfortable adjustment, please take the delivered "Smart Stylus gauge" and adjust the tracking force by using the gauge.
Please place the Smart Stylus gauge on the platter and put the cartridge on the fine line which is marked with the recommend tracking force for your cartridge (e.g. **clearaudio** MM cartridge 20 mN (2,0 gram)).


This position of the diamond correlates to a tracking force of 20 mN (2,0g).
clearaudio stylus force gauge
The tracking force is set, when the Smart Stylus gauge is parallel to the surface of the platter.
In this position the tracking force is to high. You can correct the adjustment with your tonearm weight.
In this position the tracking force is to low. You can correct the adjustment with your tonearm weight.

Picture 10: Use of the Smart Stylus gauge

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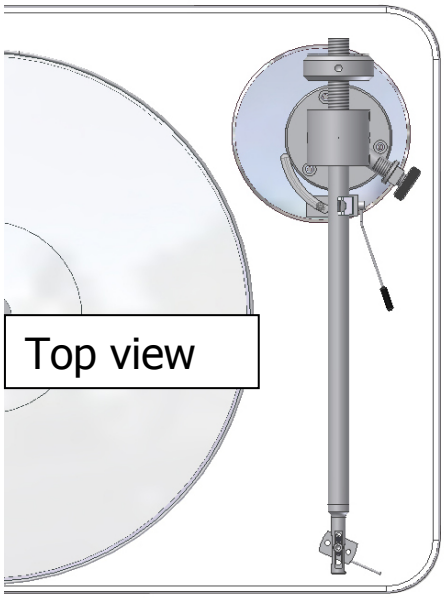
For pre-setting the tracking force, screw the counter weight on to the threaded back of the tonearm.
Take the tonearm tube from the armrest and support it with one hand while screwing the counter
weight with the other hand cautiously towards the centre of rotation of the tonearm. When the tonearm is balanced, the tracking force is should be zero. If you screw the counter weight four full turns towards
the centre of rotation axle of the tonearm, the tracking force will be about 2g. This means, one turn is 0.5 g. Now you can continue the installation. The exact and final adjustment will be done now later.

In order to adjust the correct vertical position of the tone arm, please place a record on the turntable platter and lower the pick-up on to the record.
Now you have to find the correct horizontal position of the tonearm, which should be, that the tonearm tube is parallel to the record surface.
Alter the vertical position of the tone arm by loosening the adjusting screws in the base a little, so that tonearm can be moved up and down. Tighten these screws when you reach the final horizontal position.
When the screws are tightened the satisfy-tone arm should be installed on your *Performance SE*
as shown in the top view picture.



Picture 11: Exact position of the Satisfy-tonearm

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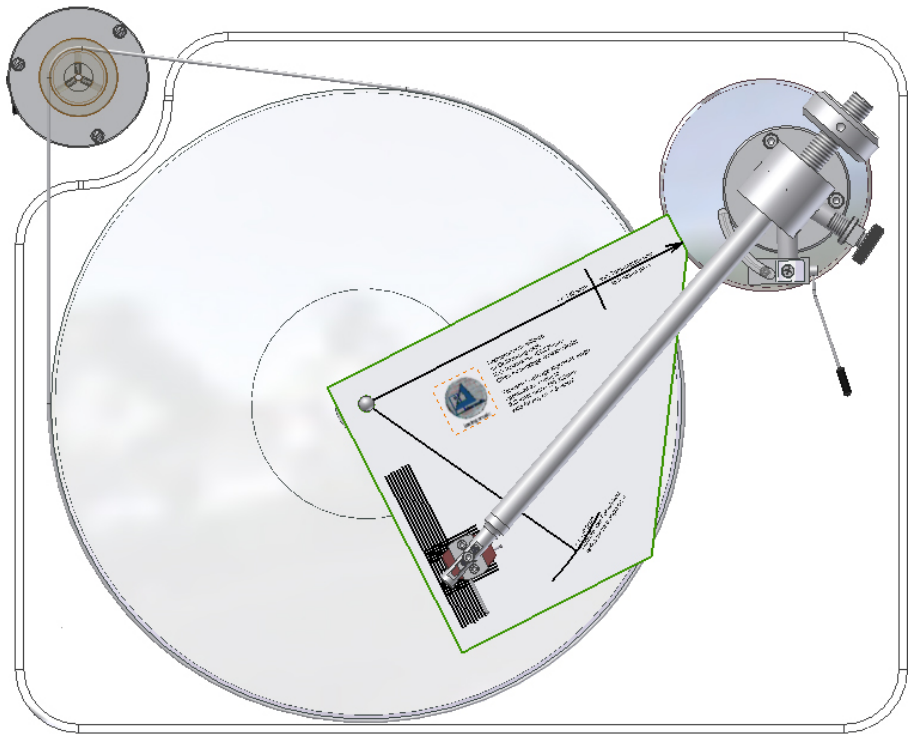
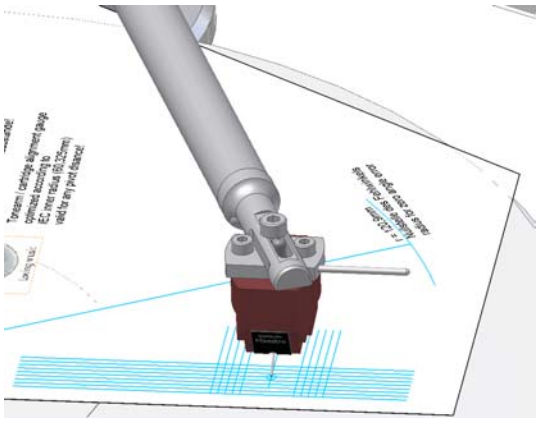
In order to align the cartridge now, push the enclosed template on the turntable spindle as shown in the picture. The arrow must point to the centre of the rotation axle of the tonearm.



Picture 12: Cartridge alignment gauge

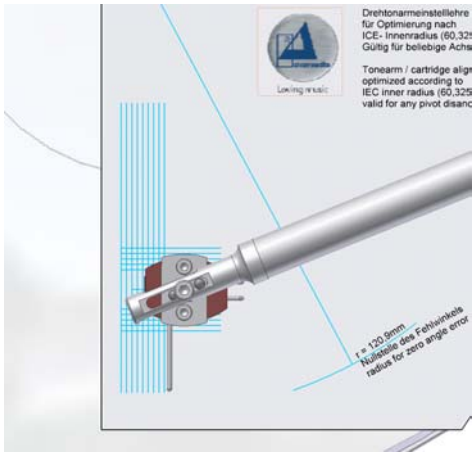
Position the pick-up/cartridge in the aligning area of the template marked by a pattern of lines.

1



Picture 13: Adjustment of cartridge

2



Picture 14: Adjustment of cartridge

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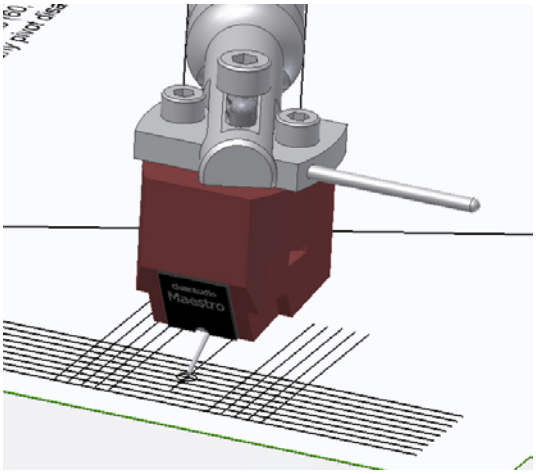
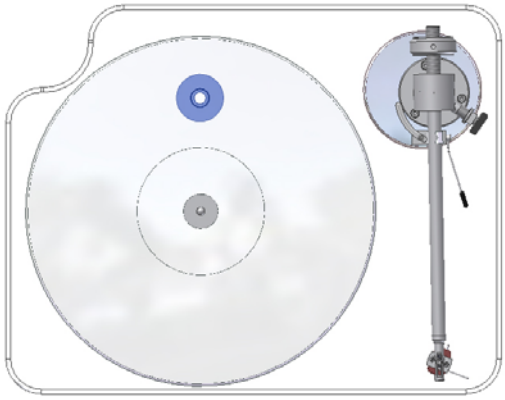
The pick-up/cartridge is adjusted correctly, if the needle points to the reference centre on the template and the printed lines are parallel to the sides and front of the pick-up/cartridge. The front of the pick-up/cartridge system should be parallel to the printed lines when looked at from above.
When loosening the central screw on the headshell you can adjust the position of the pick-up/ cartridge. Tighten the screw on the headshell again to secure the position. Check the position again.



Picture 15: Detail view of cartridge adjustment

TIP:
For even better and more easy adjustment of the pick-up/cartridge and tonearm we recommend the clearaudio installation gauge (Art.-Nr. AC 005) .



Picture 16: Using the level gauge

The following adjustment is very important:

Please make sure that your *Performance SE* - turntable is in a leveled position by using the level-gauge.
Should the bubble of the level-gauge not be in the centre of the black circle, generate the perfect position by screwing the feet of your *Performance SE* –turntable, while turning them clock or counter clock wise, till you reach the levelled position.
Only if the turntable is in the ideal position you will get the best results with your performance.

Now you can set the exact tracking force, use the recommended one, which is provided from the manufacturer of the pick-up/cartridge.
Put the scales (optional smart stylus gauge) on the surface of the platter and lower the needle of the pick-up/ cartridge to the number of the tracking weight / force you want. The tracking force is correctly adjusted if the scale / gauge is exactly in parallel level position to the surface of the platter when you have lowered the needle onto the gauge.

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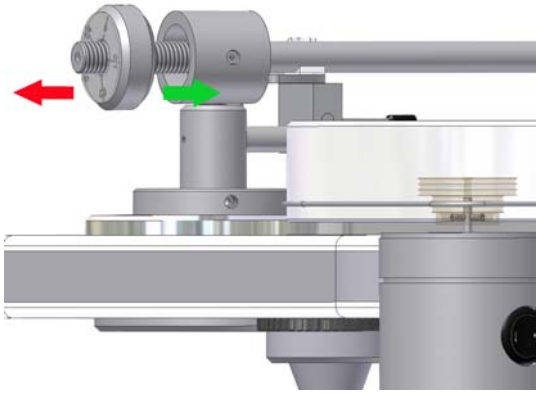
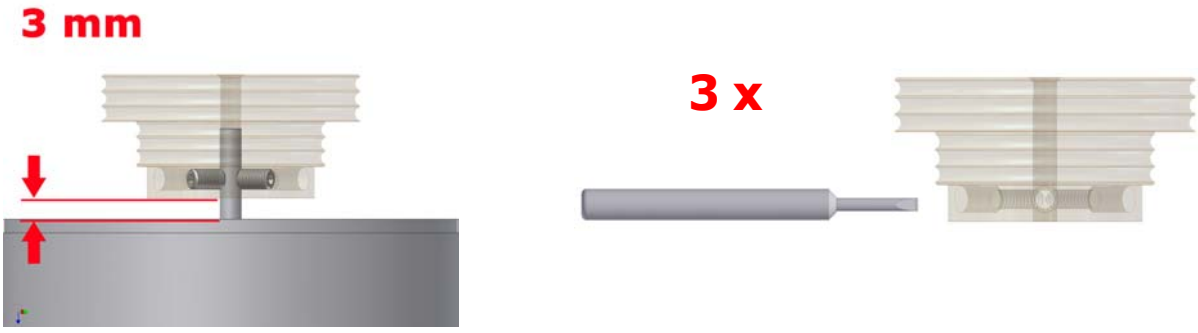
Turning the counter weight forward or backward (**green arrow = more tracking force**/**backward = less tracking force**) you can now set the exact weight of the pick-up /cartridge.



Picture 17: Changing the tracking force

Now mount the pulley on the motor-unit. Slide the pulley onto the motor axis. Make sure the distance between the bottom of the pulley and the motor-chassis is about 3 mm. Tighten the pre-mounted screws with the enclosed screwdriver.

Please use for 230 Volt motor the 6-cut pulley (e.g. Germany, Switzerland …):



Picture 18: Adjustment of the 6-cut pulley

Please place first the motor unit into the stainless steel motor stand and fix it with the two screws on the side of the motor stand.

Picture 19: Positioning the motor- unit into the stainless steel motor stand

Place the motor into the cut out on the left of chassis.

Picture 20: Positioning of the motor-unit

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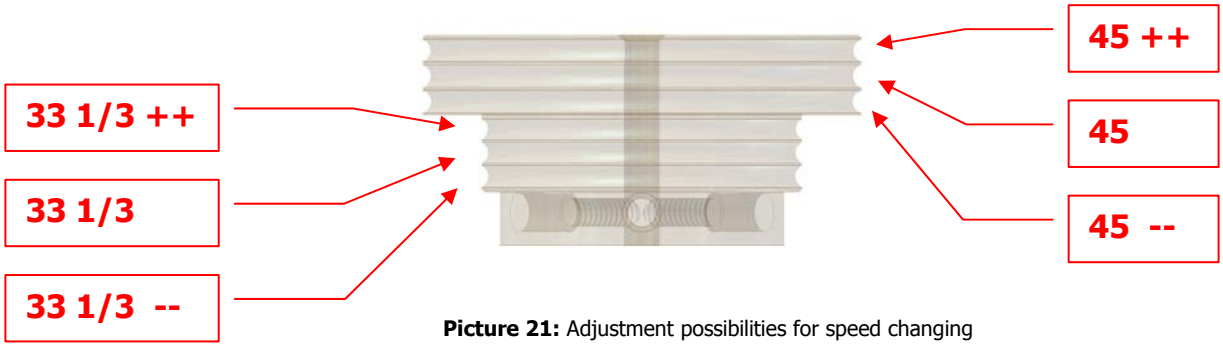
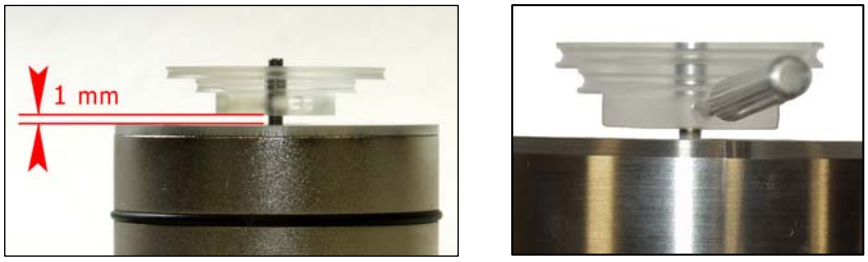
Put the belt around the platter and the pulley. The pulley is equipped with 6 little grooves fort the belt. Those with a smaller diameter are used for the speed 33 1/3 U/m, those with the bigger diameter are used for the speed 45 U/m.
The middle groove is used for the exact speed. The upper groove increases the speed a little bit, the lower groove reduces the speed a little.

Important:
Turn the platter now by hand, to ensure the perfect positioning of the belt around the platter.



Picture 21: Adjustment possibilities for speed changing

Please use for 110 Volt motors the 2-cut pulley (e.g. USA):



Picture 22: 2-cut pulley

Place the pulley on the motor spindle. The distance between the pulley and the motor housing should be approx. 1mm. Tighten the little screws inside the pulley with the aluminium screwdriver provided.

Speed calibration:

Install the drive belt, first around the platter, then around the motor pulley. There are two diameters on the motor pulley:

- smaller for 33 1/3 rpm
- larger for 45 rpm

To correctly adjust the belt tension, turn the motor around its axis. Proper tension will be achieved through eccentric placement of the motor pulley or if you have enough space on your platform, just change the distance between the motor and the turntable chassis. The belt tension is correct if the belt can be deflected by approximately ¾inch by a finger.

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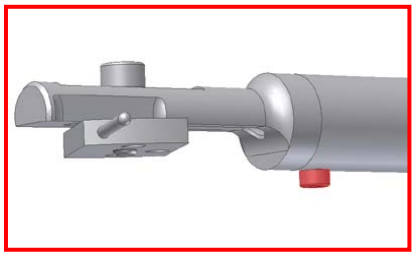
5. Azimuth-setting

Please note that the azimuth is pre-set exactly. If for any reason the azimuth must be altered to compensate the geometry of some pick-up/cartridges, follow these steps:
loosen the screw on the bottom side of the tone arm near the headshell. Now you can adjust the azimuth by turning the headshell gently in the tonearm. When finished, lock the screw again.

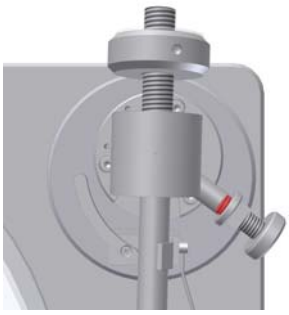


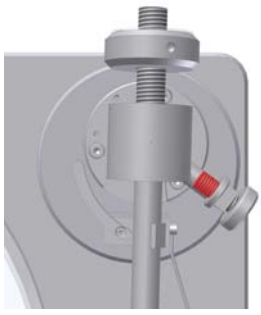
Picture 23 + 24: Loosen the screw to set the azimuth

6. Antiskating-setting

Now you can set the antiskating. It must be set in accordance to the tracking force:

Antiskating:		Tracking force:	Position of the antiskating-screw:
Minimal antiskating →		10-15mN	→see picture 1
Medium antiskating →		15-20mN	→see picture 2
Maximum antiskating	→	20mN and more	→see picture 3





picture 1 (minimal anti-skating) | picture 2 (medium anti-skating) | picture 3 (maximum anti-skating)

Picture 25: Antiskating

The tonearm is adjusted now.

Connect the power cord of the motor platter to the power supply.

Place a record on the turntable and fix it with the **clearaudio** clever clamp (enclosed).

Your *Performance SE*-turntable is completely set up and ready to play.

We wish you a lot of listening pleasure!

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7. Service

If any service or repair on all **clearaudio** products is necessary, please contact your dealer / distributor or contact **clearaudio** directly. We can inform you as well about your nearest service location.

Transportation advice:
If any transportation of the *Performance SE* -turntable should be necessary, please always remove the turntable platter. Otherwise serious damage can occur!
The bearing hole needs to be covered as well, to avoid any dust coming into the bearing. Always take of the pulley of the motor unit as well, to prevent the motor shaft from any damages.

PLEASE RETAIN ALL ORIGINAL PACKAGING. You will need it if this unit has to be transported and/or shipped. Any further questions you may have about this turntable should be directed to the distributor or directly to **clearaudio** at

clearaudio electronic GmbH

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91054 Erlangen
Germany

Tel/Phone: +49-(0)1805/059595
Fax: +49-(0)9131 /51683

www.clearaudio.de
www.analogshop.de
info@clearaudio.de

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8. Special directions

The **clearaudio** *Performance SE* does not require an extensive maintenance.

If the *Performance SE* -turntable is for a longer time not in use, please disconnect the motor from the mains supply.

Every two years you can lubricate (only if you will recognize speed variations) the bearing of the turntable platter with the supplied oil. In this case it is enough to put 4 or 5 drops of the oil onto the bearing shaft.

Don't use aggressive cleaning fluid for the *Performance SE* turntable. A few drops of window cleaner in a glass of water is fully enough.
Please dry all cleaned parts with a fine cotton kerchief carefully.

Please use for cleaning the acrylic parts **only** special **acrylic cleaning fluids** an under **no** circumstances **spirit** or **fluids based on alcohol**. (Danger of surface damages!)

You will find suitable cleaning fluids either in specialised shops or in the clearaudio online shop: www.analogshop.de .

Please take special caution to any damages of the power cord.
Any damages should only be repaired only by authorized personal.
A damaged power cord must be exchanged immediately!

To achieve the full **clearaudio** warranty, it is necessary that you fill out and send the corresponding part of the warranty registration certificate /card back to **clearaudio**, within two weeks after purchase. Only if the product is returned in it's original packing **clearaudio** can provide the warranty.

Transportation advice:
If any transportation of the *Performance SE* -turntable should be necessary, please always remove the turntable platter. Otherwise serious damage can occur!
The bearing hole needs to be covered as well, to avoid any dust coming into the bearing.
Always take of the pulley of the motor unit as well, to prevent the motor shaft from any damages.

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9. Technical data

Construction:	Resonance-optimised chassis, highly compressed wood with aluminium frame sandwiched in two aluminium plates Versions: Performance SE aluminium silver Performance SE Aluminium black
Speed ranges:	33 1/3 RPM or 45 RPM
Drive unit (motor):	Decoupled motor-unit, synchronous-motor, belt-drive
Rumble:	DIN IEC 98 by method A / 92 dB
Bearing:	Patented, Inverted bearing and polished ceramic axle, incl. CMB-magnetic-bearing-technology
Platter:	GS-PMMA / acryl, CNC-precision-cut, height 40 mm, dynamically balanced
Speed variation:	+- 0,1 %
Weight:	approx. 10 kg incl. motor
Dimensions:	In mm approx. 420 mm x 330 mm x 130 mm in inch approx: 16,54 x 12,99 x 5,12
Warranty*:	5* years

* Only if the warranty card is filled out correctly and sent back in time to **clearaudio within 14 days**.

Clearaudio electronic is not responsible for typographical errors in descriptions. Technical specifications subject to change or improvement without prior notice. Availability as long as stock lasts. Copies and imprints- also only in extracts – require written conformation through **clearaudio** electronic GmbH; Germany © clearaudio electronic GmbH 2012

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To achieve the full **clearaudio** warranty (Performance SE 5 years), it is necessary that you fill out and send the corresponding part of the warranty registration certificate /card back to **clearaudio**, within two weeks after purchase. Only if the product is returned in it's original packing **clearaudio** can provide the warranty of 5 years.

ENGLISH

WARRANTY
For warranty information, contact your local clearaudio distributor.
RETAIN YOUR PURCHASE RECEIPT
Your purchase receipt is your permanent record of a valuable purchase.
It should be kept in a safe place to be referred to as necessary for insurance purposes or when corresponding with clearaudio.
IMPORTANT
When seeking warranty service, it is the responsibility of the consumer to establish proof and date of purchase. Your purchase receipt or invoice is adequate for such proof.
FOR U.K. ONLY
This undertaking is in addition to a consumer's statutory rights and does not affect those rights in any way.

FRANÇAIS

GARANTIE
Pour des informations sur la garantie, contacter le distributeur local clearaudio.
CONSERVER L'ATTESTATION D'ACHAT
L'attestation d'achat est la preuve permanente d'un achat de valeur. La conserver en lieu sur pour s'y reporter aux fins d'obtention d'une couverture d'assurance ou dans le cadre de correspondances avec clearaudio.
IMPORTANT
Pour l'obtention d'un service couvert par la garantie, il incombe au client d'établir la preuve de l'achat et d'en corroborer la date. Le reçu ou la facture constituent des preuves suffisantes.

DEUTSCH

GARANTIE
Bei Garantiefragen wenden Sie sich bitte zunächst an Ihren clearaudio-Händler.
Heben Sie Ihren Kaufbeleg gut auf.
WICHTIG!
Die Angaben auf Ihrer Quittung erlauben uns die Identifizierung Ihres Gerätes und belegen mit dem Kaufdatum die Dauer Ihrer Garantie-Ansprüche.
Für Serviceleistungen benötigen wir stets die Gerätenummer.
Diese finden Sie auf dem Typenschild auf der Rückseite des Gerätes oder auch in der beigefügten Garantie-Registrierkarte.

NEDERLANDS

GARANTIE
Voor inlichtingen omtrent garantie dient u zich tot uw plaatselijke clearaudio.
UW KWITANTIE, KASSABON E.D. BEWAREN
Uw kwitantie, kassabon e.d. vormen uw bewijs van aankoop van een waardevol artikel en dienen op een veilige plaats bewaard te worden voor evt, verwijzing bijv, in verbend met verzekering of bij correspondentie met clearaudio.
BELANGRIJK
Bij een evt, beroep op de garantie is het de verantwoordelijkheid van de consument een gedateerd bewijs van aankoop te tonen. Uw kassabon of factuurzijn voldoende bewijs.

ITALIANO

GARANZIA
L'apparecchio è coperto da una garanzia di buon funzionamento della durata di un anno, o del periodo previsto dalla legge, a partire dalla data di acquisto comprovata da un documento attestante il nominativo del Rivenditore e la data di vendita. La garanzia sarà prestata con la sostituzione o la riparazione gratuita delle parti difettose.
Non sono coperti da garanzia difetti derivanti da uso improprio, errata installazione, manutenzione effettuata da personale non autorizzato o, comunque, da circostanze che non possano riferirsi a difetti di funzionamento dell'apparecchio. Sono inoltre esclusi dalla garanzia gli interventi inerenti l'installazione e l'allacciamento agli impianti di alimentazione.
Gli apparecchi verranno riparati presso i nostri Centri di Assistenza Autorizzati. Le spese ed i rischi di trasporto sono a carico del cliente. La casa costruttrice declina ogni responsabilità per danni diretti o indiretti provocati dalla inosservanza delle prescrizioni di installazione, uso e manutenzione dettagliate nel presente manuale o per guasti dovuti ad uso continuato a fini professionali.

ESPAÑOL

GARANTIA
Para obtener información acerca de la garantia póngase en contacto con su distribuidor clearaudio.
GUARDE SU RECIBO DE COMPRA
Su recibo de compra es su prueba permanente de haber adquirido un aparato de valor, Este recibo deberá guardarlo en un lugar seguro y utilizarlo como referencia cuando tenga que hacer uso del seguro o se ponga en contacto con clearaudio.
IMPORTANTE
Cuando solicite el servicio otorgado por la garantia el usuario tiene la responsabilidad de demonstrar cuándo efectuó la compra. En este caso, su recibo de compra será la prueba apropiada.

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